

REMARKS

Claims 2, 3, 5, 7, 13, 22, 24, 25 and 34 are pending in the application and have been allowed. Claims 1, 4, 6, 8-12, 14-21 and 26-33 were canceled in a previous amendment. Claim 7 was amended to more particularly point out and distinctly claim the invention of claim 7 and to correct an antecedent basis issue. Support for the amendment to claim 7 can be found in at least Figure 9 of the specification. Claim 13 was amended to address an obvious typographical error. Therefore, no new matter has been added.

For at least the reasons set forth below, a Notice of Allowability for all pending claims is respectfully requested.

Entry of Rule 116 Response

Entry of this response is requested because this response does not raise any new issues that would require further consideration and/or search. No new claims are being presented in this response. No new matter is raised by this response. This response could not have been previously presented because the outstanding § 103(a) rejections are based, in part, on new reasoning. Also, this amendment places the application in condition for allowance. Lastly, it is requested that the response be entered even if the application is not allowed because this response will place the application in better form for appeal by materially simplifying the issues.

If the application is not in proper form for allowance, Applicant requests that the Examiner telephone the undersigned to discuss any further outstanding issues.

Prior Art Rejections

Claims 3, 7, 22, 25 and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,710,608 (Yoshida *et al.*).

Claims 2, 5 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida *et al.* in view of U.S. Patent No. 6,362,642 (Farworth).

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida *et al.* in view of U.S. Patent No. 6,426,638 (Di Stefano).

Applicants respectfully traverse these rejections.

1. Patentability of independent claim 7 over Yoshida

Claim 7 currently reads as follows (underlining for emphasis only):

A probe module comprising:

- a probe base having a plurality of conductive metal traces;
- a plurality of probe pins attached to the probe base, each of the probe pins comprising an elongated body wherein at least part of the elongated body is bonded to at least one of the plurality of conductive metal traces of the probe base;
- a circuit interconnect device for connecting the plurality of probe pins to an inspection apparatus;
- a compression arm attached to the probe base and configured to engage the plurality of probe pins; and
- at least one adjustment element provided on the probe base that adjusts the compression arm against the plurality of probe pins to adjust a contact angle of the probe pins.

Embodiments of the present application disclose structure that allows for adjustment of a contact angle of the probe pins by adjustment of an element that adjusts a compression arm against the probe pins. Specifically, an adjustment element, such as screw 83, facilitates fine adjustment of the contact angle of the probe pins 36 by altering the pressure on compression arm 82 which is engaged with the probe pins 36. Given that there is no structural part of the base 67 above or beneath the probe pins 36 or the probe pin bodies 38 that would prevent the angular movement of the probe pin bodies 38 or the probe pins 36, the contact angle of the probe pins can be adjusted. See Figures 8 and 9 and paragraphs [0034], [0035] and [0051] of the specification.

On page 2 of the outstanding Office Action, in the rejection of claim 7, the Examiner states that Yoshida does not disclose the adjusting of the contact angle of the probe pins. However, the Examiner further states that it would have been obvious to one skilled in the art to adjust the contact angle of the probe pins in light of the adjustment element 130E that can be manipulated to adjust the compression arm 112E for pressing onto the plurality of contact pins 3aE as disclosed in Figures 16-20 of Yoshida. The Applicants respectfully disagree.

In most of the embodiments disclosed in Yoshida, including the embodiment cited by the Examiner, there is typically an upper clamp 111 and a bottom plate 116 that are combined to form the probe device. The compression arm (typically 112) of the upper clamp is adjusted via a bolt (typically 130) to apply compression force on the probe pins (typically 3aE) against the bottom plate 116. See, for example, Figs. 21-24, 27, 29, 31, 33, 38, 41-43, 46-48, and 50-52 of Yoshida. Yoshida's structural configuration does not allow for the adjustment of the contact angle of the probe pins 3aE via the compression arm 112 or bolt 130. To the contrary, increasing the compression of arm 112 via bolt 113 can only press the probe pins 3aE against the plate 116, but cannot adjust the probe pin contact angle. Therefore, in contradiction to the Examiner's statement, one skilled in the art would recognize that adjustment of the contact angle of the probe pins 3aE was not possible via a compression arm 112 and the adjustment element 130 from these embodiments of Yoshida.

In addition, none of the embodiments in Yoshida disclose or suggest the adjustment of a contact angle of the probe pins via a compression arm and adjustment element. To the contrary, Yoshida discloses that when the adjustment of the contact angle of the probe pins is desired, the probe pins (typically 36) should be bent to predetermined angles or positions (S, S1, S2) as required by the application. See at least Figures 38, 58, 59, 71, and 72 of Yoshida. Once bent into a predetermined angle or position, these angles or positions are not adjustable without reformation of the probe device. See at least column 28, lines 22-25 and column 36, lines 11-20 of Yoshida. Therefore, one skilled in the art would not recognize from these embodiments of Yoshida that the adjustment of the contact angle of the probe pins via a compression arm and adjustment element was either possible or obvious. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of claim 7.

2. Patentability of dependent claims 2, 5 and 24 over Yoshida in view of Farworth

The dependent claims 2, 5 and 24 are believed patentable over the applied references for at least the reason they are dependent upon a patentable base claim and because they recite additional patentable elements. Further, Farworth does not compensate for the deficiencies of Yoshida. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejections of claims 2, 5 and 24.

3. Patentability of dependent claim 13 over Yoshida in view of DiStefano

The dependent claim 13 is believed to be patentable over the applied references for at least the reason it is dependent upon a patentable base claim and because it recites additional patentable elements. Further, DiStefano does not compensate for the deficiencies of Yoshida. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of claim 13.

Conclusion

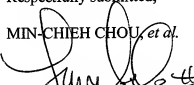
Insofar as the Examiner's objections and rejections were fully addressed, the instant application is in condition for allowance. Withdrawal of the Final Rejection, formal entry of the present "Amendment After Final," and issuance of a Notice of Allowability of all pending claims is therefore earnestly solicited.

Respectfully submitted,

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(Date)

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